



Association of ZGGBP-1 to Bipolar Affective Disorder

A single nucleotide polymorphism located in an intronic sequence for ZGGBP-1 has been identified (Figure 4). This was tested in a case: control association study containing psychiatric samples (200 Schizophrenia, 200 Bipolar Affective Disorder and 200 Unipolar Depression cases). The association data is summarised in Table 3.

AGGCATTAGACTTTTTGGAAAATGGATGCTTTTAATCTTTCCTTCCGTATATTTGTCACCCAGAATTTTAAATTT
TGGAAATTTTCATTCATTCAGTCCAGATAGAGAATTGATCAATTGGCAATTTTATTATTTTTCGCTCATGAAAAAC
TCTAGGGTTACAAGAATATGCTCCTGAAGTTAAACATAGTTACTTTTAAATGTCTCAATTCTAATGGTTAGGTAT
TAGTCTCTGAGTTCCGTTTCCCTTAACTTGSATCTTAATTTACAGTTTACAGAAAATTGTTTCATATTTTATA
[T/C]TTTAAGATCATGTACTCTAAAACCTATTATACTTGAATGAAGACCTGTTATGTTATACTAGAATCTCT
CATGAAAATGTAACAGTTCCCAAGGAACCTTTGTTTCTGTCTCCATGGACCACACTGGCTACTGTACTGGATGGAG
GGCAAGGGCGGAGCTGAGAGGCTTTGCGAGAAGTGCATGTGCGCTTAGTATGTGGCAGATCTTGGTCCCTGGCT
GTGCTGTTTCCCTCCACACCTTTGATTCTCCGAATACCAGAAAGATCATGGATTGTCTCGGGAGTTAGTCTC
CCCCCT

Figure 4: Sequence flanking intronic SNP24 for ZGGBP-1. The SNP is indicated in parentheses.

SNP	Position	Cohort	P-Value
ZGGBP-1 SNP24	Intron	200 BP/200 SZ/200 UNI/200 controls	p=0.053
ZGGBP-1 SNP24	Intron	200 BP/200 Controls (Stratified to BP cohort)	p=0.013
ZGGBP-1 SNP24	Intron	100 BP/100 controls	p=0.007
ZGGBP-1 SNP24	Intron	Combined cohorts(300BP/300Controls)	p=0.0003

In summary a weak positive association with SZ, BPAD and RUP was seen when tested with this SNP. When the data was stratified based on disease a stronger association was detected specifically with the BPAD cohort. This finding was replicated in a second cohort of BPAD cases (p=0.007). When the data from both cohorts was combined a statistically significant association with BPAD was noted (p=0.0003) indicating that ZGGBP-1 is a gene involved in BPAD.